Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

The third report of the Commission has been ordered by Congress, while a fourth upon the cotton worm and other cotton insects is in preparation. Five bulletins have appeared and three others are either in press or nearly ready for the printer. These bulletins will eventually form a volume relating entirely to practical or applied entomology.

RECENT BOOKS AND PAMPHLETS.—Ueber eine Sammlung von Fischen, welche Hr. Dr. Gerlach in Hong Kong gesant hat. Prof. W. Peters, Akademie der Wissenschaften zu Berlin. 8vo, pp. 10, plate. Berlin, Dec. 13, 1880. From the author.

Fuhrer durch die Geologischen Sammlungen in Museum des Königreiches Böhmen in Prag. Dr. Ant. Fric. 8vo, pp. 40. Prag, 1881. From the author.

Catalogue des Mammiferes vivants, et Fossiles, Rodentia (Suite). 8vo, pp, 70. Paris, 1881. From the author.

Les Petit Mammiferes de la France. Procedés pour capturer et reunir en collections les Mammifeies. Par Dr. M. Trouessart. 8vo, pp. 16, plate. Paris, 1881. From the author.

On the structure and affinities of the genus Monticulipora and its sub-genera. With critical descriptions of illustrative species. H. Alleyne Nicholson, M.D., D.Sc., F.R.S.E., F.L.S. Royal 8vo, pp. 244, cuts, 6 plates. Bound. Edinburgh and London, 1881. From the author.

Meteorological Report, 1880, including returns for 1877, 1878, 1879, and averages for previous years. Director James Hector, M.D., C.M.G., F.R.S. Colonial Museum and Geological Survey Department. 8vo, pp. 116, plates 3. Wellington, 1881. From the author.

A Memorial of Joseph Henry. Published by order of Congress. Royal 8vo, pp. 530. Engraving. Gov. Printing Office, Washington, 1881.

Osteology of Speotyto cunicularia, var. hypogæa and of Eremophila alpestris. R. W. Schufeldt, Acting Assistant Surgeon U. S. Army. 8vo, pp. 66, cuts, plates 4. Department of the Interior. Gov. Printing Office, Washington. From the author.

The Rocky Mountain Locust. Permanent courses for the Government to adopt to lessen or avert Locust injury. Charles V. Riley, M.A., Ph.D. 8vo, pp. 22, maps 6. Government Printing Office, Washington, 1881. From the author.

Census Bulletin, No. 141. 4to, pp. 4. Gov. Printing Office, Washington, 1881.

Proceedings of the United States National Museum. 8vo, pp. 31. Washington, 1881.

Bulletin of the Museum of Comparative Zoology, of Harvard. Vol. VIII, No. 8. Studies of the Jelly-fishes of Narragansett bay. J. Walter Fewkes. 8vo, pp. 41, plates 10. Cambridge, 1881. From the author.

Biographical Sketch of Louis Francois de Pourtales. Alexander Agassiz. 8vo, pp. 12. Cambridge, 1881. From the author.

Geological Notes. I. Taconic system in Geology. II. The Genesis of certain Iron ores. III. The Origin of Anthracites. IV. The recent formation of Quartz and the silicification of Wood. T. Sterry Hunt, LL.D., F.R.S. 8vo, pp. 8. Montreal, Jan. 20, 1881. From the author.

"Beiträge zur Kenntniss der Flussfische Süd-amerika's (III)" und "Ichthyologische Beiträge (XI)." Director Dr. Steindacher. From the Sitzung der Mathematisch Naturwiss. Classe Akad. Vienna. Vom 5. Mai, 1881. 8vo, pp. 15. From the author.

Illustrations of the Earth's Surface. Glaciers. Nathaniel Southgate Shaler, Professor of Palæontology, and William Morris Davis, Instructor in Geology in Harvard University. 4to, pp. 200, cuts, plates XXV. Boston, 1881. From J. B. Lippincott & Co.

Bulletin of the Museum of Comparative Zoölogy at Harvard College. Vol. VIII, No. 9. List of Mammals collected by Dr. Edward Palmer in Northeastern Mexico, with field notes by the collector. By J. A. Allen. 8vo, pp. 17. Cambridge, 1881. From the publishers.

Proceedings of the United States National Museum, 1881. Check list of duplicates of fishes from the Pacific coast of North America, distributed by the Smithsonian Institution in behalf of the United States National Museum, 1881. Prepared by David S. Jordan and Pierre L. Jouy. 8vo, pp. 48. Washington, Gov. Printing Office.

Proceedings of the United States National Museum (1881.) Notes on the Fishes of the Pacific coast of the United States. By David S. Jordan and Charles H. Gilbert. 8vo, pp. 46. Government Printing Office, Washington, 1881.

Geological Survey of Alabama, Report of progress for 1879 and 1880. Eugene A. Smith, Ph.D., State Geologist. 8vo, pp. 158, with map. Montgomery, Ala., 1881. From the author.

——:o:——

GENERAL NOTES.

BOTANY.[1]

THE GROWTH OF STARCH GRAINS.—At the suggestion of the editor of this department, I have prepared the following résumé of the results of my recent investigations. A fuller account appeared in *Bot. Zeit.*, 1881, No. 12 *et seq* (Untersuchungen über das Wachsthum der Stärkekörner).

The investigation of the development of starch grains yields several facts altogether unreconcilable with the well known theory of Nägeli, according to which they grow by intussusception. It was found that the middle part of the grain is formed first and the outer parts successively deposited around it. This is shown by the characteristic corroded structure of the small grains of many young organs, which can still be recognized very easily in the central part of the old grains, and by the comparison of grains of different age.

The corroded structure is due to the well-known circumstance that the starch of young plant-organs is only a transitory deposit which is partially used up again for the formation of cell-walls. The storing up of definitive starch begins only when the organ has reached its definitive size, and takes place partially around the remnants of the transitory grains, and partially by the formation of new grains which are of spherical shape and of course without any corroded appearance. These statements were based on observations made principally upon the starch grains of the cotyledons of *Dolichos Lablab*, *Vicia Faba* and those of the stem of *Cereus speciosissimus*.

Nägeli's theory, however, seemed to be firmly established by the following properties of starch-grains: (1) Their being made up of regularly alternating more and less watery layers, the outermost being always least watery (densest). (2) The difference of consistence between small grains and the middle part of the large ones, the first being very dense, the latter very watery. (3) Their unequal growth in different directions. (4) The growth of compound and half compound grains being, according to

---

[1] Edited by PROF. C. E. BESSEY, Ames, Iowa.